UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,371	04/09/2007	Enis Ersue	3827	6025

278 7590 04/30/2008

MICHAEL J. STRIKER
103 EAST NECK ROAD
HUNTINGTON, NY 11743

EXAMINER	
LE, JOHN H	

ART UNIT	PAPER NUMBER
2863	

MAIL DATE	DELIVERY MODE
04/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/589,371	ERSUE ET AL.	
	Examiner	Art Unit	
	JOHN H. LE	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/15/06,12/21/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or arrangement is preferred in framing the specification and, except for the reference to "Microfiche Appendix" and the drawings, each of the lettered items should appear in upper case, without underlining or bold type, as section headings. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) Title of the Invention.
(b) Cross-References to Related Applications.
(c) Statement Regarding Federally Sponsored Research or Development.
(d) Reference to a "Microfiche Appendix" (see 37 CFR 1.96).
(e) Background of the Invention.
    1. Field of the Invention.
    2. Description of the Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) Brief Summary of the Invention.
(g) Brief Description of the Several Views of the Drawing(s).
(h) Detailed Description of the Invention.
(i) Claim or Claims (commencing on a separate sheet).
(j) Abstract of the Disclosure (commencing on a separate sheet).
(k) Drawings.
(l) Sequence Listing (see 37 CFR 1.821-1.825).

2. The disclosure is objected to because of the following informalities:

Heading for each section of specification should be provided (Related Art, Background, Brief Summary of the Invention, Brief Description of the Figures, Detail Description).

Appropriate correction is required.

3. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See 37CFR 1.72.

4. The abstract of the disclosure is objected to because of the "(Figure 1)" should be avoided.

5. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

6. Claim 1 is objected to because of the following informalities:

Claim 1 recites the limitation "the design data" and "the optical imaging properties" line 5. There is insufficient antecedent basis for these limitations in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8, lines 4-5, "the optical picture-taking device calibrates the object and/or one or all displacement devices three-dimensionally to each other". It is unclear how the optical picture-taking device calibrates the object and how the optical picture-taking device calibrates the displacement device?

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Alders et al. (USP 6,320,654).

Regarding claim 1, Alders et al. disclose a method for locating flaws (location of surface defects) (Col.3, lines 37-40) on a three-dimensional object (three-dimensional surfaces of body shell of vehicle) particularly on its surface (Col.6, lines 1-3), the flaws (defects) being detected and located with an optical picture-taking device (cameras 12,14, 17, 20) (e.g. Col.8, lines 38-45), wherein the design data related to the object (surfaces of body shell) (e.g. Col.3, lines 37-40), the optical imaging properties of the picture-taking device (depth, extent, local frequency of a plurality of adjacent surface defects)(e.g. Col.3, lines 37-40) and the position of the optical picture-taking device (camera) and the object (surface body) are known when the picture is taken (e.g. Col.6, lines 21-25), the location of the flaw on the object (surface body) being determined therefrom (e.g. Col.6, lines 39-50).

Regarding claim 2, Alders et al. disclose the location of the flaw is determined in a coordinate system of the object (body shell), particularly in the coordinate system of the design data (e.g. Col.4, lines 9-16).

Regarding claim 3, Alders et al. disclose the location of the flaw is transferred to a marking device (32), which marks the location of the flaw on the object (body shell) (e.g. Col.4, lines 9-16).

Regarding claim 6, although Alders et al. is silent on the teaching of claimed the locations of flaws are displayed in a display on a screen, this feature is seen to be an inherent teaching of that step since the display screen for displaying body of vehicle connect to the computer 5 (see Fig.1), wherein the computer 5 is used for determining surface defect of the body shell (Col.8, lines Col.8, lines 38-45) that some type of claimed the locations of flaws are displayed in a display on a screen must be present for the marking device locate the defects on three-dimensional body as intended.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 4-5 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alders et al. (USP 6,320,654) in view of Kiba (USP 5,716,262).

Regarding claim 4, Alders et al. fail to disclose the marking device is movable over the object to the locations of the flaws using a displacement device.

Kiba discloses the marking device (marking apparatus, marking head 3) is movable over the object (body surface) to the locations of the flaws (defect) using a displacement device (robot 1) (e.g. Fig.1, Col.2, lines 48-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the marking device is movable over the object to the locations of the flaws using a displacement device as discussed by Kiba in a method for locating flaws of Alders et al. for the purpose of providing a marking apparatus for marking painted surface defects on a painted subject work at a predetermined level of visual distinguish ability (Kiba, Col.1, lines 44-47).

Regarding claim 5, Alders et al. disclose wherein the start path for the marking device (32) is determined based on the design data related to the object, on position data and/or previously-defined (coordinate data acquired for surface defects recognizes and transmitted to the marking device 32), permissible areas of movement of the marking device (32) (e.g. Col.4, lines 9-16).

Kiba discloses the marking device (marking apparatus, marking head 3) is movable over the object (body surface) to the locations of the flaws (defect) using a displacement device (robot 1) (e.g. Fig.1, Col.2, lines 48-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the marking device is movable over the object to the locations of the flaws using a displacement device as discussed by Kiba in a method for locating flaws of Alders et al. for the purpose of providing a marking apparatus for

marking painted surface defects on a painted subject work at a predetermined level of visual distinguish ability (Kiba, Col.1, lines 44-47).

Regarding claim 9, Kiba discloses a marking head (3) and a displacement device (robot 1), wherein the displacement device (1) positions the marking head (3) at the locations of the flaws based on design data related to the object (body surface) and transmitted position data related to the locations of flaws on the object (2) (e.g. Fig.1, Col.4, line 57 -Col.5, line 6).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alders et al. (USP 6,320,654) in view of Larsson et al. (USP 6,667,800).

Regarding claim 7, Alders et al. disclose the position of the object (position of surface on body shell) is determined exactly by comparing design data and pictures that were taken (e.g. Col.6, lines 39-50).

Alders et al. fail to disclose the optical picture-taking device is calibrated three-dimensionally.

Larsson et al. teach the optical picture-taking device (3, 4) is calibrated three-dimensionally (e.g. Col.4, lines 51-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the camera is calibrated three-dimensionally as taught by Larsson et al. in a method for locating flaws of Alders et al. for the purpose of providing methods and devices for inspecting, analyzing and identifying defects in polished surfaces (Larsson et al., Col.3, lines 25-28).

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alders et al. (USP 6,320,654) in view of Larsson et al. (USP 6,667,800) and Kiba (USP 5,716,262).

Regarding claim 8, Alders et al. fail to disclose the optical picture-taking device calibrates the object and/or one or all displacement devices three-dimensionally to each other.

Larsson et al. teach the optical picture-taking device calibrates the object (e.g. Col.4, lines 51-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the camera calibrates the object as taught by Larsson et al. in a method for locating flaws of Alders et al. for the purpose of providing methods and devices for inspecting, analyzing and identifying defects in polished surfaces (Larsson et al., Col.3, lines 25-28).

Kiba teaches the camera (6) calibrates the displacement device (control robot arm (2) of robot (1)) (e.g. Fig.1, Col.4, line 64-Col.5, line 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the camera (6) calibrates the displacement device (1) as taught by Kiba in a method for locating flaws of Alders et al. in view of Larsson et al. for the purpose of providing a marking apparatus for marking painted surface defects on a painted subject work at a predetermined level of visual distinguish ability (Kiba, Col.1, lines 44-47).

15. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alders et al. (USP 6,320,654) in view of Kiba (USP 5,716,262) as applied to claim 9 above, and further in view of Shimbara (USP 5,625, 197).

Regarding claim 10, the combination of Alders et al. and Kiba discusses supra, discloses the claimed invention except several marking heads are provided, which are capable of being positioned and/or activated independently of each other.

Shimbara teaches several marking heads (10) are provided, which are capable of being positioned and/or activated independently of each other (e.g. Fig.1, Col.3, lines 40-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include several marking heads as taught by Shimbara in a method for locating flaws of Alders et al. in view of Kiba for the purpose of providing a method of determining a scanning interval in surface inspection.

Regarding claim 11, Shimbara teaches a large number of marking heads (10) is provided and is distributed over an area of the object that will possibly be marked (e.g. Col.3, lines 48-56), the displacement device (robot 8) specifying the distance of a marking head (10) (control marker 10) to be activated from the object (surface vehicle) (e.g. Fig.1, Col.4, lines 14-20).

Regarding claim 12, Shimbara teaches a marking control (17) for controlling the displacement devices (8) for the marking heads (10) automatically assigns a location of a flaw to a marking head based on the design data (e.g. Fig.1, Col.4, lines 14-20).

Contact Information

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN H. LE whose telephone number is (571)272-2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571 272 2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John H Le/
Primary Examiner, Art Unit 2863
April 30, 2008